

**WHAT IS CLAIMED IS:**

1. A method of logging multicast data messages in a communications network; said method comprising:
  - 5 producing a log report containing data to be logged;
  - selectively implementing reliable multicast transport techniques; and
  - multicasting said log report to one or more multicast addresses in accordance with said producing and said selectively implementing.
2. The method of claim 1 further comprising:
  - 10 identifying one or more subscribers to said one or more multicast addresses;
  - determining whether said one or more subscribers require reliable data; and
  - forwarding said log report to each of said one or more subscribers in accordance with said identifying and said determining.
- 15 3. The method of claim 1 wherein said selectively implementing includes receiving a request for reliable data transmission from an application producing said log report.
4. The method of claim 2 wherein said determining includes receiving a request for reliable data transmission from an application subscribing to said one or more multicast addresses.
- 20 5. The method of claim 1 wherein said producing, said selectively implementing, and said multicasting are implemented by a computer server.
6. The method of claim 5 wherein said identifying, said determining, and said forwarding are implemented by an additional computer server.
- 25 7. The method of claim 1 further comprising:
  - transmitting said log report to a log viewer for display of at least some information related to said log report.
8. The method of claim 2 further comprising:
  - identifying a log viewer as one of said one or more subscribers; and

transmitting said log report to said log viewer for display of at least some information related to said log report.

9. A multicast logging system comprising:  
5            a log client publishing log reports to one or more multicast addresses on a communications network;  
          a log server subscribing to at least one of said one or more multicast addresses and receiving said log reports; and  
          a data storage medium receiving said log reports from said log server.

10. The system of claim 9 further comprising a log viewer subscribing to at least one of said one or more multicast addresses and allowing reception and display of information related to said log reports.

11. The system of claim 9 wherein said log client comprises a computer executable program application generating said log reports.

12. The system of claim 9 wherein said log server and said data storage medium are incorporated into a single physical machine.

15. The system of claim 9 wherein said log server comprises a plurality of distributed physical machines.

13. The system of claim 9 wherein said log client selectively implements reliable multicast transport techniques.

14. The system of claim 9 wherein said log server selectively implements reliable multicast transport techniques.

20. 15. The system of claim 9 wherein said log viewer comprises a console application.

16. The system of claim 10 wherein said log viewer is incorporated into a World Wide Web browser application.

17. The system of claim 16 wherein said log viewer is incorporated into a World Wide Web browser application.

25. 18. A computer readable medium encoded with data and computer executable instructions for transmitting a log report, the data and instructions causing an apparatus executing the instructions to:  
          produce a log report for publication to one or more multicast subscribers; said log report containing data to be logged;

selectively implement reliable multicast transport techniques; and  
multicast said log report to said one or more multicast subscribers in  
accordance with said multicast transport techniques.

19. The computer readable medium of claim 18 further encoded with data and  
computer executable instructions, further causing an apparatus to receive a  
request for reliable data transmission from an application producing said log  
report.

20. The computer readable medium of claim 18 further encoded with data and  
computer executable instructions, further causing an apparatus to receive a  
request for reliable data transmission from said one or more multicast  
subscribers.

10 21. The computer readable medium of claim 18 further encoded with data and  
computer executable instructions, further causing an apparatus to:  
transmit said log report a log viewer; and  
request said log viewer to display information related to said log  
report.

15 22. A multicast logging system comprising:  
a log client publishing log data to one or more multicast addresses on  
a communications network; and  
a log viewer subscribing to at least one of said one or more multicast  
addresses and allowing reception and display of information related to  
said log data.

20 23. The system of claim 22 wherein said log client publishes said log data  
without using reliable multicast transport techniques.

25 24. The system of claim 22 wherein said log client comprises a computer  
executable program application generating said log data.

25. The system of claim 22 wherein said log viewer comprises a console  
application.

26. The system of claim 25 wherein said log viewer is incorporated into a World  
30 Wide Web browser application.

27. The system of claim 22 further comprising:

- a log server subscribing to at least one of said one or more multicast addresses and receiving said log data; and
- a data storage medium receiving said log data from said log server.

5 28. The system of claim 27 wherein said log server and said data storage medium are incorporated into a single physical machine.

29. The system of claim 27 wherein said log server comprises a plurality of distributed physical machines.

10 30. The system of claim 27 wherein said log client selectively implements reliable multicast transport techniques.

31. The system of claim 27 wherein said log server selectively implements reliable multicast transport techniques.

15 32. A method of logging multicast data messages in a communications network; said method comprising:

- producing a message to be published to one or more multicast addresses; said message containing data to be logged;
- determining whether said data must be reliable;
- implementing reliable multicast transport techniques in accordance with said determining; and

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- publishing said data to said one or more multicast addresses in accordance with said determining and said implementing.

33. The method of claim 32 further comprising:

- identifying one or more subscribers to said one or more multicast addresses;

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- ascertaining whether said one or more subscribers require said data to be reliable; and
- forwarding said message to each of said one or more subscribers in accordance with said identifying and said ascertaining.

34. The method of claim 32 wherein said determining includes receiving a request for reliable data transmission from an application producing said message.

5 35. The method of claim 33 wherein said ascertaining includes receiving a request for reliable data transmission from an application subscribing to said one or more multicast addresses.

10 36. The method of claim 33 wherein said producing, said determining, and said publishing are implemented by a computer server.

37. The method of claim 36 wherein said identifying, said ascertaining, and said forwarding are implemented by an additional computer server.

15 38. The method of claim 32 further comprising:  
providing a log viewer capable of receiving published data addressed to at least one of said one or more multicast addresses; and  
displaying at least some of said published data received as a result of said providing.

39. An apparatus comprising:  
a log client generating log reports; and  
multicasting means for multicasting said log reports to one or more multicast addresses on a communications network.

20 40. The apparatus of claim 39 wherein said log client comprises a computer executable program application generating said log reports.

41. The apparatus of claim 39 wherein said log client and said multicasting means are incorporated into a single physical machine.

25 42. The apparatus of claim 39 wherein said multicasting means selectively implements reliable multicast transport techniques.

43. An apparatus comprising:  
a log server subscribing to one or more multicast addresses and receiving log reports transmitted to said one or more multicast addresses; and

30 a data storage medium receiving said log reports from said log server.

44. The apparatus of claim 43 further comprising a log viewer subscribing to at least one of said one or more multicast addresses and allowing reception and display of information related to said log reports.

45. The apparatus of claim 43 wherein said log server and said data storage medium are incorporated into a single physical machine.

5 46. The apparatus of claim 43 wherein said log server comprises a plurality of distributed physical machines.

47. The apparatus of claim 43 wherein said log server selectively implements reliable multicast transport techniques.

10 48. The apparatus of claim 44 wherein said log viewer comprises a console application.

49. A method of multicasting alarm messages in a communications network; said method comprising:

15 producing an alarm report comprising critical system data; selectively implementing reliable multicast transport techniques; and multicasting said alarm report to one or more multicast addresses in accordance with said producing and said selectively implementing.

50. The method of claim 49 further comprising:

20 identifying one or more subscribers to said one or more multicast addresses; determining whether said one or more subscribers require reliable data; and forwarding said alarm report to each of said one or more subscribers in accordance with said identifying and said determining.

25 51. The method of claim 49 further comprising:

transmitting said alarm report to a viewer for display of at least some information related to said alarm report.

52. A multicast alarm system comprising:

30 a client publishing alarm reports to one or more multicast addresses on a communications network; and

a viewer subscribing to at least one of said one or more multicast addresses and allowing reception and display of information related to said alarm reports.

53. The system of claim 52 further comprising:

5 a server subscribing to at least one of said one or more multicast addresses and receiving said alarm reports; and

a data storage medium receiving said alarm reports from said server.

54. The system of claim 52 wherein said client comprises a computer executable program application generating said alarm reports.

10 55. The system of claim 53 wherein said server and said data storage medium are incorporated into a single physical machine.

56. The system of claim 53 wherein said server comprises a plurality of distributed physical machines.

15 57. The system of claim 52 wherein said client selectively implements reliable multicast transport techniques.

58. The system of claim 53 wherein said server selectively implements reliable multicast transport techniques.

59. The system of claim 52 wherein said viewer comprises a console application.